EM-7.3

ORDERCODE D2162

SHOWELECTRONICS FOR PROFESSIONALS

Congratulations!

You have bought a great, innovative product from DAP Audio.
The DAP Audio EM-7.3 brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated show, this product provides the effect you need.

You can rely on DAP Audio, for more excellent audio products.
We design and manufacture professional audio equipment for the entertainment industry.
New products are being launched regularly. We work hard to keep you, our customer, satisfied.
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You can get some of the best quality, best priced products on the market from DAP Audio.
So next time, turn to DAP Audio for more great audio equipment.
Always get the best -- with DAP Audio !

Thank you!

Dap Audio

Dap Audio EM-7.3™ Product Guide

WARNING

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP!

Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:

- DAP EM-7.3
- IEC power cable
- User manual

⚠ Return Procedure ⚠

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:

1) Your name
2) Your address
3) Your phone number
4) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

WARNING

CAUTION!

Keep this system away from rain and moisture!

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this system has to:

- be qualified
- follow the instructions of this manual

CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!

Before you initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the system.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the system are not subject to warranty.

This system contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the system.

- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never leave any cables lying around.
- Do not insert objects into air vents.
- Do not connect this system to a dimmerpack.
- Do not switch the system on and off in short intervals, as this would reduce the system's life.
- Do not open the device and do not modify the device.
- Do not drive the inputs with a signal level bigger, than required to drive the equipment to full output.
- Do not plug Mics into the console (or stagebox) while Phantom Power is on. Also mute the monitor / Pa system when turning Phantom Power on or off. Allow the system to adjust for a couple of seconds, before setting the input gains.
- Only use system indoor, avoid contact with water or other liquids.
- Avoid flames and do not put close to flammable liquids or gases.
- Always disconnect power from the mains, when system is not used. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Make sure you don't use the wrong kind of cables or defective cables.
- Make sure that the signals into the mixer are balanced, otherwise hum could be created.
- Make sure you use DI boxes to balance unbalanced signals; All incoming signals should be clear.

- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the system and the power-cord from time to time.
- Please turn off the power switch, when changing the power cord or signal cable, or select the input mode switch.
- Extreme frequency boosts in connection with a high input signal level may lead to overdriving your equipment. Should this occur, it is necessary to reduce the input signal level by using the INPUT control.
- To emphasize a frequency range, you don't necessarily have to move its respective control upward; try lowering surrounding frequency ranges instead. This way, you avoid causing the next piece of equipment in your sound path to overdrive. You also preserve valuable dynamic reserve ("headroom")
- Avoid ground loops! Always be sure to connect the power amps and the mixing console to the same electrical circuit to ensure the same phase!
- If system is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the system has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your system. Leave the system switched off until it has reached room temperature.
- If your Dap Audio device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Dap Audio dealer for service.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- For replacement use fuses of same type and rating only.
- WARRANTY: Till one year after date of purchase.

OPERATING DETERMINATIONS

This system is not designed for permanent operation. Consistent operation breaks will ensure that the system will serve you for a long time without defects.

If this system is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
Any other operation may lead to dangers like short-circuit, burns, electric shock, etc.

You endanger your own safety and the safety of others!

Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.
Always pay attention, that the right color cable is connected to the right place.

International	EU (including UK) From April 2004	North America	Pin
L	Brown	Black	Phase
N	Blue	White	Neutral
⏚	Green/Yellow	Green	Protective Earth

Make sure that the device is always connected properly to earth!

Description of the device

Features

Installation mixer.

- 10 line inputs
- 2 phono inputs
- 2 mic inputs
- 3 separate selectable otput zones
- 3 master outputs with tonecontrol
- selectable record mode for each zone
- adjustable talk over function

Overview

Front

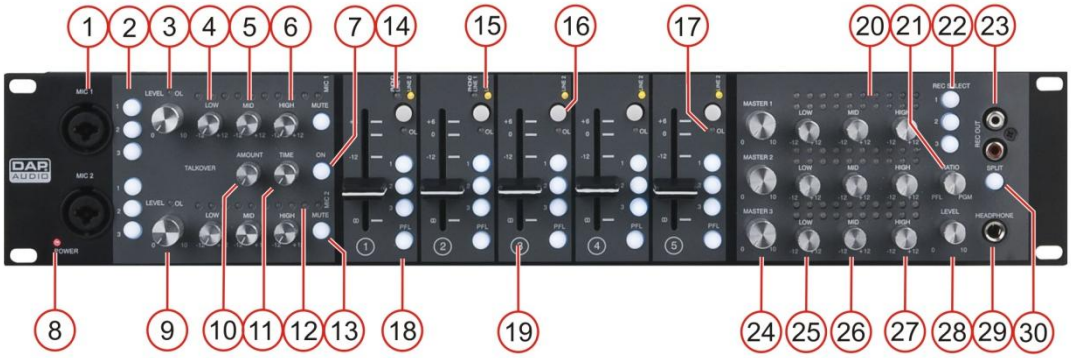


Fig. 1

1) Mic Input Balanced Combo Input (Mic 1+2)
2) Zone Select (Mic1-2 + Channel 1-5)
3) Overload LED (Mic 1+ 2)
4) Low (Mic 1+2)
5) Mid (Mic1+2)
6) High (Mic1+2)
7) Talkover On Switch
8) Power LED
9) Mic Level (Mic 1+2)
10) Talkover Amount
11) Talkover Time
12) Vu-meter (Mic 1+2)
13) Mute (Mic 1+2)
14) Phono/ Line 1 LED (Channel 1-5)
15) Line 2 LED(Channel 1-5)
16) Channel PFL Switch (Channel 1-5)
17) Overload LED (Channel 1-5)
18) PFL Switch (Channel 1-5)
19) Channel Fader (Channel 1-5)
20) VU-meter (Master 1-3)
21) Ratio
22) Record Select
23) Rec Out Unbalanced RCA Output
24) Master (Master 1-3)
25) Low (Master 1-3)
26) Mid (Master 1-3)
27) High (Master 1-3)
28) Headphone Level
29) Headphone
30) PFL Split Switch

Backside

Fig. 2

31) Power Supply Input Socket
32) Power Switch
33) Rec With Mic/ Without Mic Switch
34) Master 3 Level Switch
35) Master 2 Level Switch
36) Master 1 Level Switch
37) Gain Channel 5
38) Gain Channel 4
39) Gain Channel 3
40) Gain Channel 2
41) Gain Channel 1
42) Phono/ Line Switch Channel 2
43) Phono/ Line Switch Channel 1
44) Mic 2 Combo Input
45) Mic 1 Combo Input
46) GND
47) Rec RCA Unbalanced Out
48) Master 3 XLR Balanced Out
49) Master 3 RCA Unbalanced Out
50) Master 2 XLR Balanced Out
51) Master 2 RCA Unbalanced Out
52) Master 1 XLR Balanced Out
53) Master 1 RCA Unbalanced Out
54) Channel 5 Line 1/ Line 2 Input
55) Channel 4 Line 1/ Line 2 Input
56) Channel 3 Line 1/ Line 2 Input
57) Channel 2 Phono-Line 1/ Line 2 Input
58) Channel 1 Phono-Line 1/ Line 2 Input

Installation

Remove all packing materials from the EM-7.3. Check that all foam and plastic padding is removed. Connect all cables.

Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

Functions

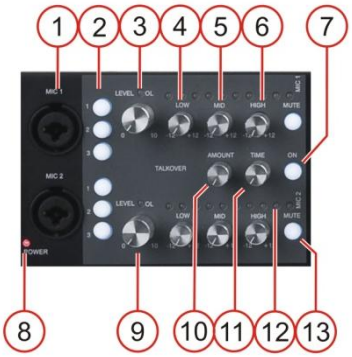


Fig. 3

1. MIC
Electronically balanced XLR-type input for connecting low impedance microphones. The input has extremely low noise and low hum. When connecting a microphone make sure that the pin assignment is correct. Always make sure to read the manual of the microphone you want to connect. The XLR- input is not suitable for connecting an additional mixing console, FX- unit, etc. You have to use the **Line**- inputs, when connecting this kind of equipment.

Note: When connecting signal sources, please make sure that the corresponding channel faders and the master faders are at their minimum settings. Otherwise unpleasant plug-in noise can occure.

2. Zone select
Use these 3 switches to assign the channel to 1 or more master outputs.

3. Overload Indicator
The overload indicator shows peak levels in a channel's incoming signal level. If the red overload LED frequently blinks or constantly lights, the corresponding channel is likely to enter clipping and you have to reduce the input's amplification using the **level** control. The **overload LED** lights at a level of 8 dB below clipping. Make sure that the **overload LED** lights only briefly during dynamic peaks.

4 / 5 / 6. Equalizer SECTION (HI / MID / LOW)
The mixer's Equalizer section allows shaping of the incoming audio signal. All mono input channels are fitted with 3-band EQ. The **Hi (6)** and **Low (4)** shelving controls have their frequencies fixed at 12KHz and 80Hz respectively. The **Mid (5)** range control has a peaking response frequency at 2.5KHz. All 3 bands have up to 12dB cut and boost, with a centre detent. Turning an Equalizer control to the right amplifies the frequency range, turning to the left attenuates the signal. Minor changes to the Equalizer control usually produce the best results. Try to avoid excessive enhancement of the MID band.

7. Talkover On Switch
Use this switch to activate the talkover function.

8.Power LED
The red **power LED** lights when the Sessionmix is turned on. If after switching the device on, the LED does not light, make sure that the AC adapter is connected properly. If the LED still doesn't light up after everything is connected right, please contact your DAP audio.

9. MIC Level (Mic 1/2)
Controls the volume of the Microphone channel.

10. Talkover Amount Control
Use this control to set the amount of signal reduction for the **line channels 1-5** when spoken in the microphone.

11. Talkover Time Control
This control allows you to set the time for returning to the normal volume level of the **line channels 1-5** if you stop speaking in the microphone.

12. Mute Switch
Use this witch to mute the according Microphone channel.

13. Mic Channel Signal VU Meter (Mic 1+2)
This meter is a multi-step LED. The accurate level indication allows you to monitor the Microphone channel signal level at anytime, and match with other devices.

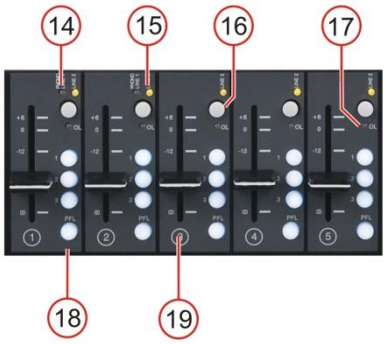


Fig. 4

14. Phono-Line 1 Indicator
Indicates that the **Phono-Line 1** input is selected.

15. Line 2 Indicator
Indicates that the **Line 2 input** is selected.

16. Selection Switch (Phono-Line 1/Line 2)
With this switch you can select between two sets of inputs per channel.

17. Overload Indicator
The overload indicator shows peak levels in a channel's incoming signal level. If the red **overload LED** frequently blinks or constantly lights, the corresponding channel is likely to enter clipping and you have to reduce the input's amplification using the corresponding gain **(36-40)** control on the back. The **overload LED** lights at a level of 8 dB below clipping. Make sure that the **overload LED** lights only briefly during dynamic peaks.

18. PFL
The PFL button (pre fade listening) is designed to route the channel input to the monitor section independent of the individual channel's volume fader setting. It is possible to assign more than one channel simultaneous to the PFL bus.

19. Channel Fader
A logarithmic 50mm fader, which controls the volume of it's channel. The faders should be positioned within range of -12dB to 0dB, leaving you with sufficient room to allow precise matching of differences in the channel's level settings. The overall volume is set with the master fader. Even though the channel faders offer an additional gain of +6dB, it is better not to exceed the +0dB position by default.

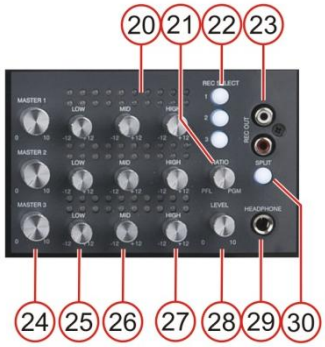


Fig. 5

20. Output Signal VU Meter (Master 1-3)
This meter is a multi-step LED. The accurate level indication allows you to monitor the output signal level at anytime, and match with other devices.

21. Ratio
Use this control to make a headphone mix between your PFL and your master signal.

22. Rec Select
Use to select on or more master outputs to the **Rec Out** output **(22, 46)**.

23. Rec Out
Unbalanced RCA Record out output for connecting a recording device.

24. Master (Master 1-3)
You can adjust the output signal to the **Master Output**.

25 /26 /27. Equalizer SECTION (Master 1-3)
The mixer's Equalizer section allows shaping of the incoming audio signal. All mono input channels are fitted with 3-band EQ. The **High (27)** and **Low (25)** shelving controls have their frequencies fixed at 12KHz and 80Hz respectively. The **Mid (24)** range control has a peaking response frequency at 2.5KHz. All 3 bands have up to 12dB cut and boost, with a centre detent for. Turning the Equalizer to the right amplifies the frequency range, turning to the left attenuates the signal. Minor changes to the Equalizer control usually produce the best results. Try to avoid excessive enhancement of the MID band.

28. Headphones Level
This control allows you to adjust the headphones' volume.

29. Headphone
You can connect a pair of headphones with an impedance of 32 - 600 Ohm to the headphones connector. It is a 6,3mm/ 1/4" TRS socket, wired as Tip=left, Ring=right and sleeve = ground.

Caution: Depending on the type of headphones connected to the Headphones jack, the EM-7.3 is capable of producing high output levels via the phones output. Therefore, make sure to turn the control all the way to the left (minimum setting) before connecting the headphones. Be aware of the fact that listening to loud sound pressure levels over a longer period of time leads to hearing damage!

30.PFL Split Switch
This switch controls the routing to your headphone. In **split** mode the PFL signal is send to the Left ear of the headphone connected to the **Headphone output (28)** the master signal is send to the Right ear of the headphone. In normal mode the PFL and master signal are send to both ears of the headphone.

Fig. 6

31. Remote Power Supply Input Socket
This is the remote AC power supply input socket for the EM-7.3. It is a special three core socket. Please use the supplied DAP audio adapter only.

32. Power On/Off
Do not supply power before the whole system is set up and connected properly.

33. With/ Without Mic Switch
Use this switch if you don't want your microphone signal at the **record outputs (22/46)**.

34. Master 3 Level Switch
This selector allows you, to set the output level (0,75V or 1,5V) for the Master 3 outputs.

35. Master 2 Level Switch
This selector allows you, to set the output level (0,75V or 1,5V) for the Master 2 outputs.

36. Master 1 Level Switch
This selector allows you, to set the output level (0,75V or 1,5V) for the Master 1 outputs.

37. Channel 5 Gain
Channel 5 input level is determined by the Gain control. With the Gain control you can adjust the line input-sensitivity, while optimally matching the incoming signals to the mixer's internal operation level. The high gain of this mixer is ideal when dealing with very low input levels.

38. Channel 4 Gain
Channel 4 input level is determined by the Gain control. With the Gain control you can adjust the line input-sensitivity, while optimally matching the incoming signals to the mixer's internal operation level. The high gain of this mixer is ideal when dealing with very low input levels.

39. Channel 3 Gain
Channel 3 input level is determined by the Gain control. With the Gain control you can adjust the line input-sensitivity, while optimally matching the incoming signals to the mixer's internal operation level. The high gain of this mixer is ideal when dealing with very low input levels.

40. Channel 2 Gain
Channel 2 input level is determined by the Gain control. With the Gain control you can adjust the line input-sensitivity, while optimally matching the incoming signals to the mixer's internal operation level. The high gain of this mixer is ideal when dealing with very low input levels.

41. Channel 1 Gain
Channel 1 input level is determined by the Gain control. With the Gain control you can adjust the line input-sensitivity, while optimally matching the incoming signals to the mixer's internal operation level. The high gain of this mixer is ideal when dealing with very low input levels.

42. Channel 2 CD/PHONO Selector
Used to set the input level for the channel 2 **Phono-Line** Input **(55)** for either phono or line level.

43. Channel 1 CD/PHONO Selector
Used to set the input level for the channel 1 **Phono-Line** Input **(56)** for either phono or line level.

44. Mic 2 Combo Input
Depending on what's most suitable in a given situation, you can use the Combo input at the front or the rear. Both inputs are wired in parallel so you can even use them to link through.

45. Mic 1 Combo Input
Depending on what's most suitable in a given situation, you can use the Combo input at the front or the rear. Both inputs are wired in parallel so you can even use them to link through.

46. GND
Use to connect the ground wire of your turntable.

47. Record RCA Unbalanced Out
Use these to connect a recording device.

48. Booth RCA Unbalanced Out
Use these outputs to connect an amplifier with unbalanced inputs.

49. Master 3 XLR Balanced Out
Use these outputs to connect an amplifier with balanced inputs.

50. Master 2 RCA Unbalanced Out
Use these outputs to connect an amplifier with unbalanced inputs.

51. Master 3 XLR Balanced Out
Use these outputs to connect an amplifier with balanced inputs.

52. Master 1 RCA Unbalanced Out
Use these outputs to connect an amplifier with unbalanced inputs.

53. Channel 5 RCA Line Inputs
Use to connect a line level device. You can select one of two the Line inputs with the Line select switch on the frontpanel.

54. Channel 4 RCA Line Inputs
Use to connect a line level device. You can select one of two the Line inputs with the Line select switch on the frontpanel.

55. Channel 3 RCA Line Inputs
Use to connect a line level device. You can select one of two the Line inputs with the Line select switch on the frontpanel.

56. Channel 2 RCA Line/Phono-Line Inputs
Use the **Line input** to connect a line level device. Depending on the position of the **Phono/Line selector (37)**, you can connect either a line level device or a turntable to the **Phono-Line** input.

57. Channel 1 RCA Line/Phono-Line Inputs
Use the **Line input** to connect a line level device. Depending on the position of the **Phono/Line selector (38)**, you can connect either a line level device or a turntable to the **Phono-Line** input.

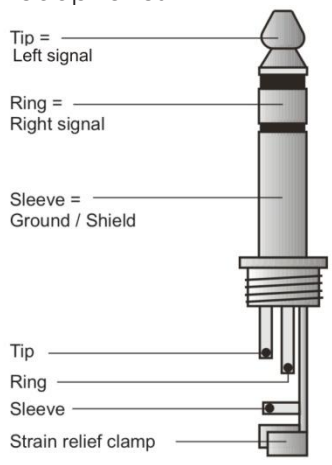
Set Up and Operation

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

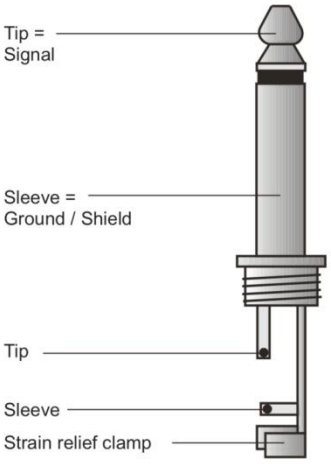
Connection Cables

Take care of your cables, always holding them by the connectors and avoiding knots and twists when coiling them: This gives the advantage of increasing their life and reliability.
Periodically check your cables. A great number of problems (faulty contacts, ground hum, discharges, etc.) are caused entirely by using unsuitable or faulty cables.

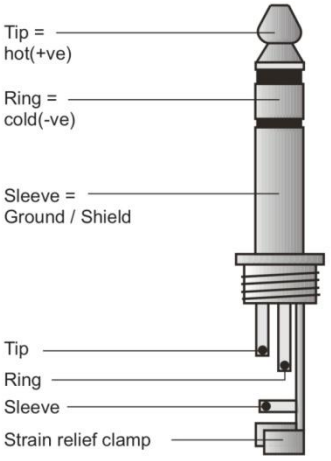
Headphones



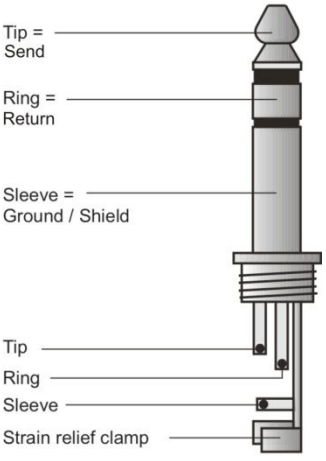
Unbalanced mono

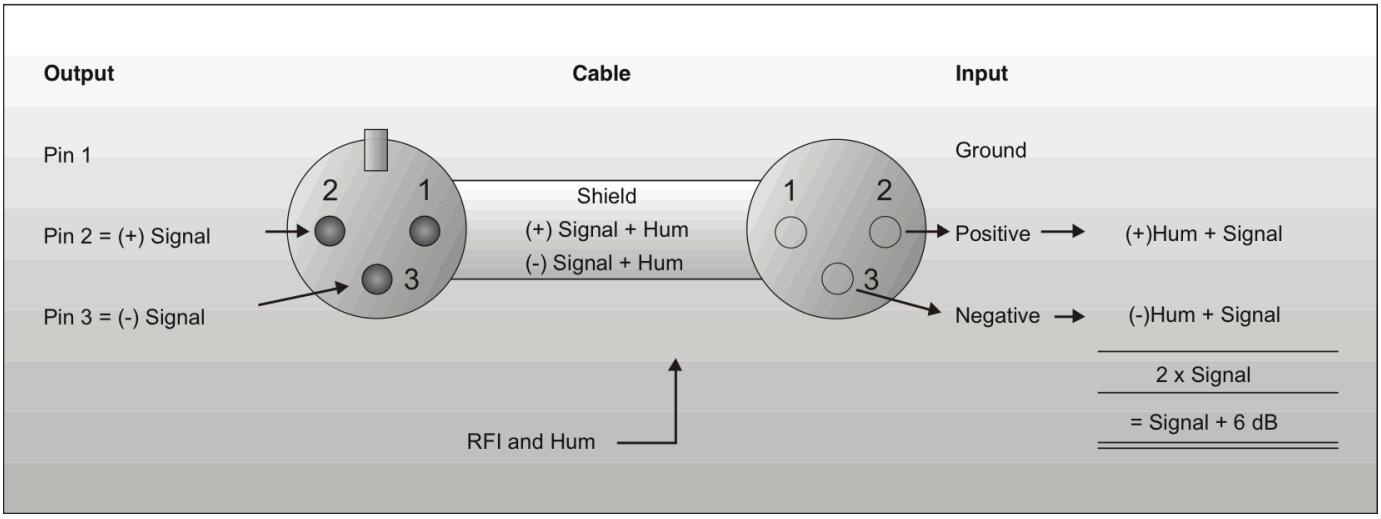


Balanced mono

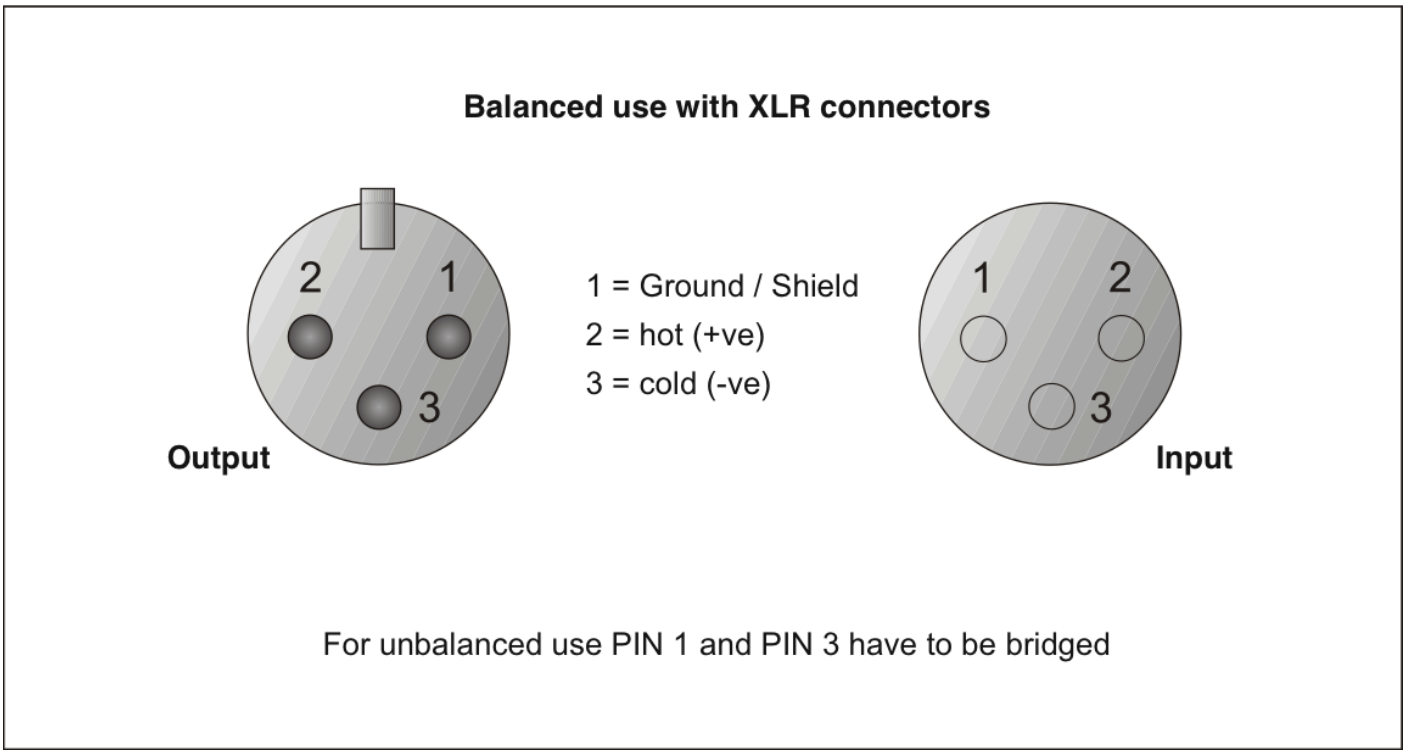


Insert





Compensation of interference with balanced connections



Maintenance

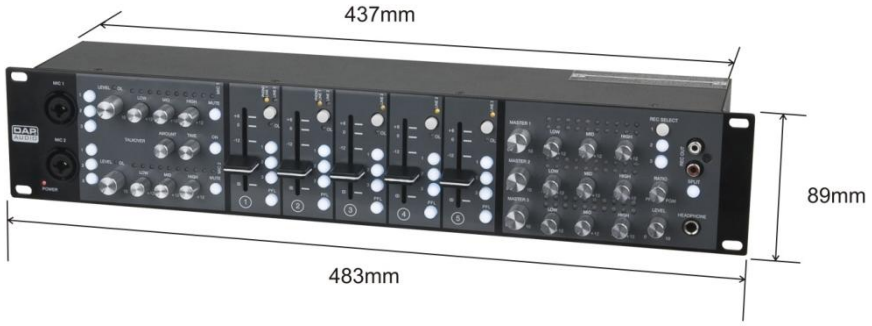
The DAP Audio EM-7.3 requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.
Keep connections clean. Disconnect electric power, and then wipe the audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

DAP Audio EM-7.3
This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.
1. If the device does not operate properly, unplug the device.
2. Check power from the wall, all cables, connections, etc.
3. If all of the above appears to be O.K., plug the unit in again.
4. If nothing happens after 30 seconds, unplug the device.
5. Return the device to your DAP Audio dealer.

Product Specification

Power supply: AC 230V - 50 Hz
Power consumption: 1A
Inputs: 10 line, 2phono, 2 mic
Line: cinch unbalanced, 150mV/50K
Phono: cinch unbalanced, 2,6mV/51K
Mic: combo jack/XLR balanced, 1,5mV/1K
Outputs: 3 zones, 1 rec, 1 headphone
Zones: cinch, XLR balanced, 0,75/1,5V
Rec: cinch unbalanced, 0,75V
Headphone: stereo jack, 300mV
Frequency response: 20Hz - 20kHz
Total harmonic distortion: < 0,03%
Stereo seperation: > 45dB
Signal to noise ratio: mic 70dB, Phono 60dB, Line 78dB
Dimensions: 483 x 100 x 89 (LxWxH)
Weight: 2,9kg



Design and product specifications are subject to change without prior notice.

CE

Website: www.Dap-audio.info
Email: service@highlite.nl